

REMARKS

This Application has been carefully reviewed in light of the final Office Action mailed September 21, 2004. Claims 1-28 are pending in this application. Claims 1-28 have been rejected by Examiner. Applicants believe that all pending claims are in condition for allowance and respectfully request reconsideration and favorable action in this case.

Section 103 Rejections

The Examiner rejects Claims 1-12 and 14-28 under 35 U.S.C. §103(a) as obvious over Applicants' admitted prior art (*AAPA*) in view of U.S. Patent No. 6,778,503 issued to Sproat, et al. ("*Sproat*"). The Examiner further rejects Claim 13 under 35 U.S.C. §103(a), as being obvious over the *AAPA* in view of *Sproat* as applied above, and further in view of U.S. Patent No. 6,243,382 issued to O'Neill et al. ("*O'Neill*").

In order to establish a prima facie case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge available to one skilled in the art, to modify a reference or combine multiple references; (2) there must be a reasonable expectation of success; and (3) the prior art reference, or the combination of references, must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Applicants respectfully argue that *Sproat*, *O'Neill*, and the *AAPA*, whether considered alone or in combination, all fail to teach or suggest all the limitations of any of Claims 1-28. Therefore, a prima facie case of obviousness cannot be maintained.

For example, Claim 1 recites "segmenting the first components of the traffic streams into successive cells" and "distributing the second components of the traffic streams between a defined set of the cells for in-band transmission of the second components in a payload of each of the cells, the second components being positioned at the beginning of the payload of each cell." As recognized by the Examiner the *AAPA* does not teach segmenting the first components of a traffic stream into cells and distributing CAS components (which may be one type of "second component") in the payloads of these cells at the beginning of the payload. However, the Examiner states that these limitations are disclosed in *Sproat*. Applicants respectfully disagree.

In fact, *Sproat* specifically indicates that this is not how the invention described therein operates. Instead, the purpose of that invention is to remove the CAS values and possibly other signaling from the data (e.g., DS-0s) and “pack” all of that signaling together in one or more cells that do not contain any data. *See, e.g., Abstract, lines 3-6 and Col. 9, lines 25-40.* As a further example, in association with Figure 4, *Sproat* describes the following:

Referring to FIG. 4 herein, there is illustrated schematically a process carried out by TDM framer-cellifier 201 in a best mode implementation *in which channel associated signaling from a plurality of incoming channels is extracted from a data stream of the channel and assembled into a first data frame comprising a 48 byte payload of an ATM adaptation layer zero (AAL 0) cell.* In the best mode herein an AAL 0 cell is used for containment of channel associated signaling data for convenience, since the 48 byte payload of an AAL 0 cell is convenient for packaging of CAS data of both E1, and T1 channels. Referring to FIG. 4 herein, AAL 0 cell 400 comprises a 5 byte header 401, followed by a 48 byte payload 402. *In the case of a T1 multiframe input to interface 200, channel associated signaling for a complete T1 trunk of 24 T1 channels is packed into a single AAL 0 payload 403 as shown.*

Col. 9, lines 50-65 (emphasis added). Therefore, this passage described completely filling the 48-byte payload of an AAL 0 cell with 24 2-byte CAS values (one from each of 24 T1 channels).

Furthermore, Figures 5 and 6 of *Sproat* (and the associated description) simply provide other alternatives of this same basic idea – extracting the signaling information from the data and placing the signaling information together in a cell. For example, *Sproat* describes the following in association with Figure 5:

Referring to FIG. 5 herein, there is illustrated an alternative AAL 0 payload containing channel associated signaling data from an E1 16 frame multiplex. A first 3 bytes 501-503 of the payload are occupied by channel associated signaling data ABCD and tone signaling data of two E1 circuit switched channels. The channel associated signaling data of each channel occupies 4 bits of a single byte of the 48 byte ATM payload, followed by two successive bytes reserved for each of the two E1 circuit switched channels. *This pattern is repeated 16 times, such that the channel associated signaling and tone bits of 32 individual E1 circuit switched channels occupies a single AAL 0 payload.*

Col. 10, lines 12-23 (emphasis added). Therefore, all the signaling is extracted and packed together into a cell. In this case, the signaling is a combination of CAS values and E1 tone signaling (see Col. 8, lines 14-22 for a description of “tone signaling” – it is included in *Sproat’s* definition of CAS). The Examiner may be referring to the statement that the “channel associated signaling data of each channel occupies 4 bits of a single byte of the 48 byte ATM payload, *followed by two successive bytes reserved for each of the two E1 circuit switched channels.*” However, it is clear from the figure and the preceding and subsequent sentences that this is referring to E1 tone signaling (tone bits), which is a type of signaling. Therefore, there is no disclosure of any combination of the recited “first components” and “second components” in a cell, much less the specific arrangement recited in Claim 1.

In addition, *Sproat* describes the following in association with Figure 6:

Referring to FIG. 6 herein, there is illustrated a *method for packing an AAL 0 cell 48 byte payload with channel associated signaling data from 4 T1 multiframes.* Each T1 multiframe comprises channel associated signaling data of 4x12 bits, which is packed into 6 bytes of the AAL 0 payload, allowing CAS data from 96 DSO circuits per AAL 0 cell payload. A sampling rate of 12 ms can be achieved using the packing method of FIG. 6.

Col. 10, lines 39-46 (emphasis added). Again, this figure illustrates simply putting all the signaling information in a cell together. There is no disclosure of any combination of the recited “first components” and “second components” in a cell, much less the specific arrangement recited in Claim 1.

For at least these reasons, independent Claim 1, as well as the claims that depend from Claim 1, are allowable over the cited references. Furthermore, for similar reasons as described above, independent Claims 14, 17, and 23 (as well as their dependent claims) are allowable over the cited references. Therefore, Applicants respectfully request reconsideration and allowance of these claims.

In addition to their dependence on an allowable independent claim, the dependent claims of the present application recite further limitations not disclosed in the cited

references. For example, Claims 2 and 24 recite that the second components are substantially evenly spread between the set of cells. This is clearly not disclosed in *Sproat* since the second components are put into separate cells from the first components and thus are not substantially evenly spread between “the defined set of the cells” (which are the cells into which the first components are segmented, according to the second limitation of Claim 1). For at least this additional reason, Claims 2 and 24 are allowable.

Furthermore, Claims 3, 19, and 25 recite segmenting the first component of each traffic stream into a fixed position in successive cells. This is not shown in Figure 4 of *Sproat* (as the Examiner suggests) since the cell illustrated in this figure only includes second components (as described above, tone bits are signaling bits – a type of “reduced rate second component”). For at least this additional reason, Claims 3, 19, and 25 are allowable.

In addition, Claim 4 recites that the defined set of cells is a superframe and that successive superframes are transmitted without insertion of intervening superframe information. While the *AAPA* may mention and *Sproat* may suggest superframes (as argued by the Examiner), neither of these references discloses or suggests that superframes are transmitted without insertion of intervening superframe information. For at least this additional reason, Claim 4 is allowable.

Also, Claims 7 and 21 recite that the reduced rate second component comprises control information for the first component. The Examiner points out that the CAS values are a type of control information. However, the tone bits/tone signaling described in *Sproat* are also a type of control information. Therefore, *Sproat* does not disclose cells having both first and second components, as claimed, only cells consisting entirely of second components. For at least this additional reason, Claims 7 and 21 are allowable.

Moreover, Claims 8 and 18 specifically recite that the first components are DS-0s and that the second components are CAS values for the DS-0s. Claims 10 and 27 further recite that the cells in which the DS-0s and CAS values are included are ATM AAL cells. The Examiner argues that DS-0s, CAS values, and ATM AAL cells are disclosed in the *AAPA*

and *Sproat*. However, this is beside the point, since neither reference discloses that these components are placed into cells as recited in the independent claims from which these claims depend. For at least this additional reason, Claims 8, 10, 18, and 27 are allowable.


CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Brian W. Oaks, Attorney for Applicants, at the Examiner's convenience at (214) 953-6986.

Although Applicants believe that no fees are due, the Commissioner is hereby authorized to charge additional fees or credit any overpayments to Deposit Account No. 02-0384 of Baker & Botts, L.L.P.

Respectfully submitted,
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